AMENDMENTS TO CLAIMS

1.-27. (Canceled):

28. (Currently Amended): A device for detaching a break-away panel part of a dental model molding tray from a hollow body part of said tray which encloses said break-away panel, said break-away panel being located between upper and lower surfaces of said body of said molding tray and being joined by frangible members to horizontally aligned flange walls which protrude inwardly towards said panel from inner sides of a peripheral wall of said hollow tray body, said device including;

a. a template comprising a body which includes,

(I) a base

(ii) a peripheral flange wall which protrudes upwardly from said base,

(iii) a recess formed between an upper surface of said base and inner surfaces of said peripheral flange wall, said recess being of a proper size and shape to vertically downwardly receive therein said hollow body of said tray, with said lower surface of said tray body parallel to and above said upper surface of said template base, and with outer upstanding surfaces of said tray perimeter wall adjacent to said inner facing upstanding surfaces of said peripheral flange wall of said template, and

(iv) at least one rib-shaped lug which protrudes upwardly from said upper surface of said template base, said lug having a flat upper surface which is located a greater distance above said upper surface of said template base than the distance between a lower surface of said break-away panel and said lower surface of said hollow tray body, whereby said lug supports said break-away panel to thereby locate said lower surface of said hollow tray body above said upper surface of said template, and

b. force exerting means for exerting a downwardly directed force on at least a first abutment flange which ~~promotes~~ protrudes outwardly from said tray body relative to said

template, whereby a reaction force is exerted upwardly on said break-away panel relative to said tray body sufficient to break said frangible members joining said break-away panel to said flanges, said force exerting means including a knock-out tool which has a plurality of at least three circumferentially spaced apart, downwardly protruding lower abutment flange-contacting members for contacting an upper surface of said abutment flange of said tray, and an upper anvil surface rigidly coupled to said flange-contacting members and adapted to receive a downwardly directed impact.

29. (Previously Canceled)

30. (Previously Canceled)

31. (Previously Canceled)

32. (Original): The device of Claim 28 wherein said recess of said template is further defined as having in plan-view the shape of a semi-ellipse.

33. (Original): A drilling alignment fixture for facilitating drilling blind bores for the receipt of manipulating pins into bases of die segments of a dental model cast contained in a molding tray, said alignment fixture comprising an elongated body which includes;

a. a base plate which has a generally flat lower surface and a generally flat upper surface parallel to said lower surface, said upper surface having formed therein an elongated, shallow recess which is adapted to receive vertically downwardly therein a lower portion of a molding tray, with a lower surface of said tray supported on said upper surface of said base plate.

b. a drill guide bushing disposed through said upper and lower surfaces of said base plate,

c. indexing means for visually aligning a vertical center line of said drill guide bushing with a selected longitudinal position of a dental model casting contained in said tray, said position corresponding to a desired longitudinal location for drilling a pin bore into said dental model cast, and

d. means for moving said tray horizontally on said upper surface of said base plate to thereby align said selected location of said dental model cast with said indexing means and said drill bit guide bushing.

34. (Original): The drilling alignment fixture of Claim 33 wherein said indexing means for visually aligning a vertical center line of said drill bit guide bushing with a selected longitudinal position of a dental model casting in said tray is further defined as an aperture through said tray located below a void left in said cast by removal of die stone segment which is to have a pin bore drilled in the base thereof.

35. (Original): The drilling alignment fixture of Claim 33 wherein said recess in said upper surface of said base plate is further defined as being a generally rectangular shaped channel which is adapted to longitudinally slidably receive a rectangular shaped dental modeling tray.

36. (Original): The drilling alignment fixture of Claim 33 wherein said base plate is further defined as having a plan-view perimeter shaped generally like a semi-ellipse.

37. (Original): The drilling alignment fixture of Claim 36 wherein said recess in said upper surface of said base plate is further defined as having a generally semi-elliptical plan-view shape of the proper size and shape to vertically downwardly receive therein a semi-elliptically shaped tray, with said upper surface of said base plate supporting a lower surface of said tray.

38. (Original): The drilling alignment fixture of Claim 37 wherein said base plate is further defined as having through its thickness dimension a semi-elliptical sector-shaped aperture which has an outer semi-elliptically shaped wall located radially inwardly of and generally parallel to a perimeter of said base plate, and an inner semi-elliptically shaped wall located radially inwardly of and generally parallel to said outer aperture wall, said aperture orbitally holding said drill bit guide bushing.

39. (Original): The drilling alignment fixture of Claim 38 further including a radially disposed arm which has an inner radial end portion pivotably fastened to a lower surface of said base plate, an outer radial portion which includes indexing means for aligning said arm with a

selected circumferential portion of said perimeter wall of said base plate, and an intermediate portion which has therethrough a bore which receives therein a lower portion of said drill bit guide bushing.

40. (Original): The drilling alignment fixture of Claim 37 wherein said indexing means is further defined as including a pointed end portion of said arm which is radially aligned with said center line of said drill bit guide bushing and which protrudes radially outwardly of said base plate.

41. (Original): The drilling alignment fixture of Claim 40 wherein said indexing means if further defined as a gnomon which protrudes perpendicularly upwardly from said pointed end portion of said arm, in radial alignment with said center line of said drill bit guide bushing.

42. (Currently Amended): A slide receptacle for releasably holding a full-arch dental model tray and cast and attaching ~~the~~ said receptacle to an arm of an articulator apparatus, said slide receptacle comprising;

a. a base plate,

b. means for releasably attaching a dental model tray containing a dental model cast to said base plate, said means comprising in combination,

(i) a horizontally disposed abutment flange which protrudes from a perimeter wall of said base plate of said tray, and

(ii) means attached to said base plate for frictionally engaging said abutment flange in response to sliding lower surface of said tray on an upper surface of said base plate,

c. means for releasably attaching said base plate to an arm of an articulator apparatus, ~~and~~ said means including a ferromagnetic member recessed in a lower surface of said base plate,

d. a plurality of indexing members which protrude downwardly from a lower surface of said base plate, and

~~d.~~ e. whereby said dental model cast tray is repeatedly fixable in a pre-determined position on said articulator arm for proper occlusal relationship of said dental model cast to

an opposing arch, without requiring application of plaster or other attachment means to said tray, and whereby said tray is removable from said receptacle and connectable via hinge coupling means to comprise with an opposing dental model cast in an opposing tray an articulatable full-mouth dental model not requiring use of said articulator apparatus.

43. (Canceled)

44. (Currently Amended): The slide receptacle of Claim ~~43~~ 42 wherein at least a portion of said base plate thereof is further defined as having a semi-elliptical shape.

45. (Canceled)

46. (Canceled)

47. (Currently Amended): The slide receptacle of Claim ~~46~~ 42 wherein said releasable attachment means is further defined as a magnetic member attachable to said arm of said articulator apparatus.

48. (Original): A method for manipulating a pair of opposed dental model casts held in separate dental model trays comprising the steps of:

a. providing a separate receptacle for each of a pair of trays holding a master dental model cast and an opposing dental model cast,

b. releasably attaching each of said trays holding master and dental model casts to a separate one of said receptacles,

c. releasably attaching each of said receptacles to a separate one of an upper and lower arm of a three-dimensional dental model laboratory articulator apparatus,

d. effecting relative movement between said arms of said articulator to confirm proper occlusal relationship between a dental prosthesis fabricated from at least one of said dental model casts,

e. removing said receptacles from said arms of said articulator,

f. removing said dental model casts and prostheses from said receptacles, and

g. attaching together said dental model trays holding said dental model casts and said prosthesis by a hinge coupler which enables said master and opposing dental model

casts to be pivoted towards and away from one another, whereby occlusion of said dental models and prosthesis may be viewed without requiring use of said articulator.

49. (Original): The method of Claim 48 wherein said receptacle slidably receives said dental model tray.

50. (Original): The method of Claim 49 wherein said attaching of said receptacle to said articulator arms employs means which enable a receptacle to be repeatedly attached to and removed from said articulator arm at a precisely repeatable location.

51. (Original): The method of Claim 50 wherein said means enabling repeated removal and re-attachment of said receptacle at a precisely repeatable location of said articulator arm is further defined as including magnetically attachable means on said receptacle and said articulator arm.

51-65 (Canceled):

66. (Currently Amended): The slide receptacle of Claim ~~65~~ 71 wherein said front transversely disposed channel segment joins at laterally opposed outer portions thereof front portions of said laterally opposed side channel segments.

67. (Previously Presented): The slide receptacle of Claim 66 wherein said front and side channel segments are joined together to form a continuous channel.

68. (Previously Presented): The slide receptacle of Claim 67 wherein said channel has an arcuately curved plan-view shape.

69. (Previously Presented): The slide receptacle of Claim 68 wherein said channel has a semi-oval plan-view shape.

70. (New): A slide receptacle for releasably holding a full-arch dental model tray and cast and attaching said receptacle to an arm of an articulator apparatus, said slide receptacle comprising;

a. a base plate,

b. means for releasably attaching a dental model tray containing a dental model cast to said base plate, said means comprising in combination,

(i) a horizontally disposed abutment flange which protrudes from a perimeter wall of said base plate of said tray, and

(ii) means attached to said base plate for frictionally engaging said abutment flange in response to sliding lower surface of said tray on an upper surface of said base plate, said means for frictionally engaging said abutment flange including a channel structure fixed to said base plate and forming therewith a channel having an opening adapted to insertably receive said abutment flange of said base plate of said tray in response to sliding said lower surface of said tray on said upper surface of said base plate, said channel structure comprising in combination a flange wall which protrudes upwardly from said upper surface of said base plate, said flange wall having a lip which protrudes inwardly from an upper edge of said flange wall towards a center of said base plate, said flange wall thereby forming with said base plate a C-shaped cross section, open channel, said channel having a transversely disposed rear opening adjacent to a transversely disposed rear edge wall of said base plate and a pair of laterally opposed side segments, said side segments having rear portions which are disposed forward of said rear transverse edge wall of said base plate, and a front abutment stop affixed to said base for limiting forward sliding motion of said base of said tray to a predetermined forward limit position,

c. means for releasably attaching said base plate to an arm of an articulator apparatus, and

d. whereby said dental model tray is repeatedly fixable in a pre-determined position on said articulator arm for proper occlusal relationship of said dental model cast to an opposing arch, without requiring application of plaster or other attachment means to said tray, and whereby said tray is removable from said receptacle and connectable via hinge coupling means to comprise with an opposing dental model cast in an opposing tray an articulatable full-mouth dental model not requiring use of said articulator apparatus.

71. (New): A slide receptacle for releasably holding a full-arch dental model tray and cast and attaching said receptacle to an arm of an articulator apparatus, said slide receptacle comprising;

a. a base plate,

b. means for releasably attaching a dental model tray containing a dental model cast to said base plate, said means comprising in combination,

(i) a horizontally disposed abutment flange which protrudes from a perimeter wall of said base plate of said tray, and

(ii) means attached to said base plate for frictionally engaging said abutment flange in response to sliding lower surface of said tray on an upper surface of said base plate, said means for frictionally engaging said abutment flange including a channel structure fixed to said base plate and forming therewith a channel having an opening adapted to insertably receive said abutment flange of said base plate of said tray in response to sliding said lower surface of said tray on said upper surface of said base plate, said channel structure comprising in combination a flange wall which protrudes upwardly from said upper surface of said base plate, said flange wall having a lip which protrudes inwardly from an upper edge of said flange wall towards a center of said base plate, said flange wall thereby forming with said base plate a C-shaped cross section, open channel, said channel having a transversely disposed rear opening adjacent to a transversely disposed rear edge wall of said base plate and a pair of laterally opposed side segments, said side segments having rear portions which are disposed forward of said rear transverse edge wall of said base plate, and a front transversely disposed segment,

c. means for releasably attaching said base plate to an arm of an articulator apparatus, and

d. whereby said dental model tray is repeatedly fixable in a pre-determined position on said articulator arm for proper occlusal relationship of said dental model cast to an opposing arch, without requiring application of plaster or other attachment means to said tray, and whereby said tray is removable from said receptacle and connectable via hinge coupling

means to comprise with an opposing dental model cast in an opposing tray an articulatable full-mouth dental model not requiring use of said articulator apparatus.